

CONTROL # 09/803067 (AMENDED)

A B S T R A C T

A METHOD FOR ACHIEVING A 5 LOG REDUCTION OF PATHOGENS (99.99%)
IN JUICES USING A ULTRA VIOLET GENERATED ACTIVATED OXYGEN
GAS. THIS PROCESS WAS APPROVED BY THE FDA IN JUNE 26, 2001
(REFERENCE : FEDERAL REGISTER VOL. 66, NO 123 PAGE 33829).
THE ULTRA VIOLET LAMP CREATES A SPECIFIC WAVE LENGTH
(185 NANO METER) WHICH DESTROYS (BY OXIDATION) PATHOGENS
ON CONTACT. THE ACTIVATED OXYGEN GAS IS INTRODUCED INTO
A CONTAINER HOLDING THE JUICE BY USING A SPARGING SYSTEM
WHICH DELIVERS THE ACTIVATED OXYGEN GAS IN 20 TO 60 MICRON
BUBBLES IN THE CONTAINER (SATURATING THE JUICE) WHICH
ALLOWS ACTIVATED OXYGEN GAS CONTACT WITH THE PATHOGENS,
THUS ACHIEVING THE FDA REQUIRED 5 LOG REDUCTION IN PATHOGENS.
THE ACTIVATED OXYGEN SYSTEM AND SPARGING SYSTEM ARE
ALSO DISCLOSED.
THIS METHOD DOES NOT DESTROY THE ENZYMES IN THE LIQUID AS ALL
PASTEURIZATION SYSTEMS DO (ANY TEMPERATURE OVER 123 DEGREE F
DESTROYS ALL ENZYMES).

28 CLAIMS

3 DRAWING SHEETS

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